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August 24, 2009

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
c/o Natek, Inc.
236 Massachusetts Avenue N.E
Suite 110
Washington, D. C. 20002

REFERENCE: 47CFR182(q), Media Bureau

Dear Madame Secretary:

Attached are the original and requisite 4 stapled copies of a Petition for Rulemaking submitted by the firms of duTreil, Lundin & Rackley, Inc. and Hatfield & Dawson Consulting Engineers, LLC.

Should there be questions or further information required please correspond directly with the undersigned (c/o H&D) or with Ronald D. Rackley, P.E. (c/o dLR).

Sincerely,

Benj. F. Dawson III, P.E.

BFD/bhs

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Before the
Federal Communications Commission
Washington, D.C.

In the matter of:

Modification of Section 73.182(q), Footnote 1, to Promote Improvement of Nighttime Service by AM Radio Stations by Eliminating the "Ratchet Clause."	)))))	RM No. _____

PETITION FOR RULEMAKING

Introduction

1. The engineering consulting firms of du Treil, Lundin & Rackley, Inc. and Hatfield & Dawson, with a combined history of representing radio station licensees with regard to engineering matters before the Commission for more than 100 years, hereby request the opening of a rulemaking to streamline the Rules by eliminating a specific requirement that has a negative impact on AM radio stations wishing to make changes to their nighttime facilities. The petitioners believe that this requirement, in addition to impeding the improvement of facilities that are impacted by it, has never served the purpose for which it was originally intended and that, furthermore, it has had a negative impact on nighttime AM service in the United States.

Purpose

2. This proposal seeks to eliminate the following words, commonly referred to as the "ratchet clause," from footnote 1 of 73.182(q): *Those interferers that contribute to another station's RSS using the 50% exclusion method are required to either reduce their contributions to that RSS by 10%, or to a level at which their contributions no longer enter into the 50% RSS value, whichever is the lesser amount of reduction.*

Rationale

3. History since this requirement was added to the Rules in 1991 has shown that it does not serve its intended purpose. The fact that it is a serious impediment for stations wishing to make modifications to alleviate nighttime coverage difficulties due to noise and man-made interference is obvious. Stations with the greatest opportunity to provide interference-free nighttime service are the ones that are harmed the most by this requirement. Furthermore, a subsequent FCC decision has recognized that the underlying precept of the requirement is defective and that it has an opposite effect to that of maximizing nighttime interference-free service to the public.

Coverage Improvement is Prevented

4. The "ratchet clause" has the opposite effect of improving the interference-free signals of AM stations. Because power reduction is generally the only remedy available for addressing its requirements when radiation must be decreased toward a station that receives theoretical interference located anywhere around a nondirectional station or within the major lobe region of an existing nighttime directional antenna pattern, changes to make antenna system improvements and/or relocate transmitter sites are discouraged. Stations wishing to make changes, whether by moving to more advantageous locations or simply changing directional antenna parameters to provide null fill to better serve suburban areas around their existing transmitter sites, are prevented from doing so without decreasing their overall coverage. The improvements to the coverage areas of protected stations are relatively small when compared with the signal level lost by stations making changes subject to the "ratchet clause," in part because a 10% reduction of one contributor to a nighttime interference-free RSS having several contributors, which is generally the case in AM nighttime allocations, results in a smaller percentage reduction in the RSS interference-free level. Changes that could improve AM band nighttime service to the public go unrealized because of the "ratchet clause."

Stations with the Most Opportunity are the Most Affected

5. The "ratchet clause" tends to penalize stations that have been on the air the longest, and therefore have the lowest nighttime interference levels and largest coverage areas of the stations on their channels. Its purpose is to reduce interference to newer stations that were added accepting interference from older stations when they went on the air. The newer stations tend to have higher nighttime interference levels and, therefore, smaller coverage areas than the older stations. It is the older stations, with larger coverage areas, that have the most opportunity to optimize service to the public by modifying their facilities.

6. Even if it were possible to have an even trade between the coverage lost by older stations and the coverage gained by newer stations by application of the "ratchet clause," there would be the historical inequity of requiring the older stations to suffer loss of coverage to reduce interference at the newer stations that went on the air acknowledging the interference they would receive from the older stations and accepting it in the first place. That consideration, while legitimate, is overshadowed by the fact that an even trade is far from the reality of the "ratchet clause." In general, the improvement in coverage of the newer stations from application of the "ratchet clause" is minimal and, at best, it is a horrendously inefficient process for trying to improve the overall nighttime service of AM radio stations in the United States.

Reduction in Interference-Free Coverage

7. A simple example illustrates that the net effect of applying the "ratchet clause" is generally detrimental. We posit Station A as a 5.0 kilowatt station on 1000 kilohertz with a quarterwave nondirectional antenna and a nighttime interference free level of 3.0 mV/M and Station B as a 5.0 kilowatt co-channel station located some distance away that has a nighttime interference-free RSS of 13.0 mV/m including a single limit from Station A of 8.3 mV/m. The Station B antenna was designed to have a null in its vertical radiation pattern protecting Station A, but Station A was there first and does not protect

Station B. Both stations have 5 mS/m ground conductivity within their coverage areas. If Station A makes a transmitter site change subject to the "ratchet clause" and is required to reduce its interference contribution to Station B by 10%, the single limit from station A will decrease from 8.3 mV/m to 7.5 mV/m and the nighttime interference-free RSS at Station B will decrease from 13.0 mV/m to 12.5 mV/m. The following table summarizes the impact of the "ratchet clause" on the nighttime interference-free ("N.I.F.") coverage areas of both stations.

Station	Before Change			After Change		
	N.I.F. (mV/m)	Coverage Radius (km)	Coverage Area (km^2)	N.I.F. (mV/m)	Coverage Radius (km)	Coverage Area (km^2)
A	3.0	38.3	4,608	3.0	36.5	4,185
B	13.0	18.7	1,099	12.5	19.2	1,158

Station A suffers a loss in coverage area of 423 square kilometers while Station B realizes a 59 square kilometer increase in coverage area – resulting in a net reduction in coverage of 364 square kilometers considering both stations. Although this example examines a hypothetical situation involving two nondirectional stations to simplify the analysis, it represents the general case for stations employing nighttime directional antennas well – as older stations tend to have newer stations receiving interference from them within their directional pattern major lobe areas and reducing power is the only practical means for reducing it.

8. The foregoing example is representative of the results that can be expected when the "ratchet clause" is employed in the processing of an AM antenna change application. Not only does no improvement in overall service result, it is typical to see an overall reduction in the combined coverage areas of the stations involved. The petitioners know

of no situation where the "ratchet clause" has been used where there was a net increase in area covered by interference-free nighttime signals.

FCC Decision has Invalidated the Principle

9. In addition to the net reduction in nighttime interference-free coverage of stations involved in cases where the "ratchet clause" is enforced, the fact that the station that reduces its radiated field is making a change in groundwave coverage that is present 100% of the time to effectuate a reduction in an interfering signal that is present 10% of the time at another stations results in an "apples to oranges" comparison of the coverage impact on both stations. This inequity has been recognized in a Commission decision, subsequent to the "ratchet clause" being placed in the Rules, that invalidated the basis upon which the "ratchet clause" was adopted. In the Commission letter dated June 11, 1997, "In re: KIOQ(AM), Folsom, CA," [see Appendix] which denied a waiver of the 5 mV/m to 5 mV/m second-adjacent channel overlap rule despite higher nighttime interference-free levels at both of the stations involved, the Commission clearly explained that groundwave coverage, which is present 100% of the time, has primacy over signal levels calculated based on 10% of the time assumptions. As the "ratchet clause" forces an AM station making a change to reduce its 100% of the time groundwave field strength in a certain direction to in turn reduce interference that theoretically occurs 10% of the time at another station, it is upside-down, in principle, from the doctrine employed in the KIOQ decision. This decision by the Commission, alone, dictates that the requirement should be eliminated from the Rules in order to have equity in the regulation of AM radio broadcasting.

Administrative Efficiency

10. Presently, waivers are approved for stations meeting certain criteria centered around the necessity of making transmitter site changes due to circumstances beyond the control of their licensees. Applications for such stations must contain formal waiver requests including much specific detail and each one must receive special consideration from the

Commission's staff. Resources of both applicants and the Commission staff will be conserved if the proposed change is made to the Rules.

Conclusion

11. The petitioners believe that a rulemaking to evaluate the proposed change in the Rules will address a matter of high importance for AM stations wishing to remain competitive by providing better service to their local audiences at night. It is believed that a significant number of comments will be received from the pubic as well as the ranks of station owners and engineering specialists to support the proposed change. No controversy is expected outside the area of allocation standards between existing stations, as there will be no impact on the creation of new or the elimination of existing aural transmission channels, and no significant controversy is expected with regard to allocation standards between stations as the merits of the proposed change should be obvious to objective observers on all sides of the question. The benefits will be immediate. We urge the Commission to act expeditiously in opening the rulemaking process for the proposed change.

Respectfully Submitted,

August 24, 2009

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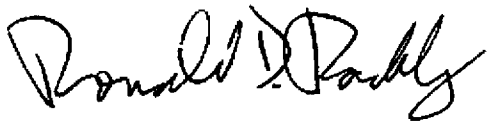

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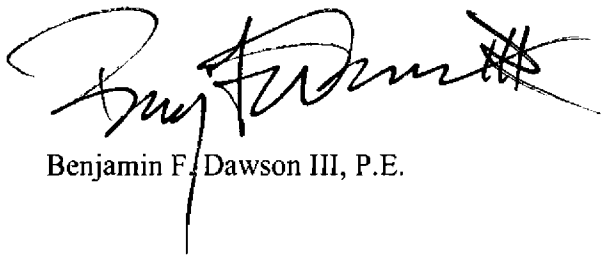

Benjamin F. Dawson III, P.E.

APPENDIX

"Letter to counsel, In re: KIOQ(AM), Folsom, CA, File no. BMP-960807AA"

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In re: KIOQ(AM), Folsom, CA
File No. BMP-960807AA
Has: 1030 kHz, 50 kW-day, 1.0 kW-night, DA-2-U
Req: 1030 kHz, 50 kW-day, 50 kW-night, DA -2-U

Dear Counsel:

We have on file the above-referenced major change application filed by Royce International Broadcasting Company ("RIBC,") permittee of unbuilt AM station KIOQ(AM), Folsom, CA, which proposes to modify outstanding construction permit File No. BP-900522AC.[1] Also on file is a petition to deny ("Petition") filed by Pacific FM Inc., ("Pacific,") licensee of KOFY(AM), San Mateo, CA., and various responsive pleadings.

Pleadings

In the Petition, Pacific asserts that the subject application will cause prohibited overlap in violation of 47 C.F.R. § 73.37(a) between KIOQ(AM)'s proposed 5 mV/m nighttime groundwave contour and the 5 mV/m nighttime groundwave contour of KOFY(AM)'s licensed second adjacent channel facilities. Pacific contends that "[t]his rule applies to both day and night

[1] The application proposes to change the nighttime power, tower location, and antenna system.

groundwave overlap, as demonstrated by § 73.37(d)."[2]

In opposition, RIBC asserts that ". . . Pacific's reference to Section 73.37(d) is very misleading -- it leaves out the reference in Section 73.37(d) which states that the calculation of objectionable interference must be made as determined pursuant to § 73.182(l)." RIBC contends that the second adjacent channel protection of the 5 mV/m contour is not required. Instead, the nighttime interference free "NIF" contour should be used to determine the interference between these two stations, according to 47 C.F.R. § 73.182(b).[3] RIBC further asserts that KIOQ(AM)'s proposed NIF contour of 18.1 mV/m does not overlap the KOFY(AM) 18.1 mV/m night contour, therefore providing sufficient nighttime protection to KOFY(AM)'s existing facilities.

Decision

KOFY's 5 mV/m nighttime groundwave contour must be protected pursuant to Section 73.37(a) of Commission Rules. The argument advanced by RIBC has been previously rejected by the Commission in *ORO SPANISH BROADCASTING, INC.*, 6 FCC Rcd. 4411 (1991).

> The value of [the NIF] contour was obtained by applying the method specified in 47 C.F.R. § 73.182(l); it is a measure of the effect that fluctuating skywave signals will have on a groundwave signal, and is a factor in calculations that are used to evaluate and control interference. Listeners inside the [NIF] contour should experience objectionable skywave interference less than 10% of the time, whereas listeners outside the [NIF] contour should experience objectionable skywave interference more than 10% of the time. The word 'objectionable' [in 73.37(d)] means that the interference exceeds a specified value and that the quality of the service is reduced accordingly. It does not mean that service outside the [NIF] contour is rendered unusable. In contrast, interference by a groundwave signal, as is the case here, would cause objectionable interference 100% of the time. Not only would this groundwave interference compound the skywave interference but it would be more destructive within the area of overlap.

We note that although KIOQ(AM)'s subject application did not request a waiver of 47 C.F.R. § 73.37(a), had such a waiver been requested, it would not have been granted. The Commission is reluctant to grant waivers of 47 C.F.R. § 73.37 even under extreme circumstances.[4]

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[2] Section 73.37(d) states, "[i]n addition to demonstrating compliance with paragraphs (a), and, as appropriate, (b), and (c) of this section, an application for . . . a major change . . . in an authorized AM broadcast station, as a condition for its acceptance, shall make a satisfactory showing, if new or modified operation by a Class B station is proposed, that objectionable interference will not result to an authorized station, as determined pursuant to Section 73.182(l)."

[3] Section 73.182(b) states that, "[w]hen a station is already limited by interference from other stations to a contour value greater than that normally protected for its class, the individual received limits shall be the established standard for such station with respect to interference from each other station."

[4] *See ORO SPANISH BROADCASTING, INC.*, 6 FCC Rcd. 4411. (1991). A waiver of 47 C.F.R. 73.37 was not granted, although the applicant asserted a unique situation in which the subject station's transmitter site was completely within the 2 mV/m nighttime contour of a licensed second adjacent facility. Subsequently, any

Additionally, should RIBC decide to file an amended application in which overlap to KOFY(AM)'s 5 mV/m nighttime contour has been eliminated, RIBC's attention should be directed to the currently pending application to modify the KOFY(AM) facilities (File No. BMP-960830AD).

Other Matters

A preliminary review of the application has revealed that the proposed daytime 50 kW pattern with a theoretical RMS of 2181.18 mV/m @ 1 km, and the nighttime 50 kW pattern with a theoretical RMS of 2426.90 mV/m @ 1 km, will result in a loss resistance per tower of 0.44 ohms and 0.80 ohms, respectively. The nominal power and specified theoretical RMS of the proposed standard radiation patterns must result in a 1 ohm loss resistance per tower pursuant to 47 C.F.R. § 73.150. Therefore, this deficiency must also be corrected in any future application.

Conclusion

For the reasons stated above, the Pacific FM Inc. Petition to Deny **IS HEREBY GRANTED,** to the extent indicated herein, and the subject application (File No. BMP-960807AA) **IS HEREBY RETURNED** as unacceptable for filing.

Sincerely,

Dennis Williams

Dennis Williams
Assistant Chief
Audio Services Division
Mass Media Bureau

cc: Norwood J. Patterson

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increase in power by the subject station would have resulted in an increase of prohibited overlap, therefore violating Section 73.37 of Commission's rules.